



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

that he generally commenced his measurements from the forehead, beginning with the prominence between the eyebrows. He agreed with Mr. Blake that they should not be hasty in drawing conclusions, and he admitted that the facts were as yet very scanty, but he hoped within a short time to be able to enlarge them greatly. With respect to the size of the *receptaculum cerebelli*, on which part of the paper Mr. Blake had made some remark, he said his impression was that in most cases it was small, though not in all. The breadth between the mastoid processes was sometimes very great in Keltic skulls. With regard to the measurements of Swedes, he observed that his measurements were not taken from skulls but from living heads of Swedish sailors in Bristol. They came from all parts of the coast of Sweden. There were thirty of them.

*Report of Explorations conducted in the Kirkhead Cave at Ulverstone.*

By J. P. MORRIS, F.A.S.L. Abstract. [The paper will appear at length in the *Memoirs*.]

The Kirkhead bone-cave is situated on the brow of a steep hill on the eastern shore of the promontory of Cartmel, and about 85 feet above high-water mark. So far as is known, its dimensions are—length, 40 feet; width, 20 feet; height from surface of deposit, 14, 9, and 7 feet, under three separate domes. The floor of the cavern consists of bones, earth, angular fragments of limestone, and water-worn pebbles of clay-slate, indiscriminately mixed. The principal objects of interest found were portions of human crania, especially of the frontal and parietal bones, human leg and arm bones, and vertebræ. A few inches below the surface was found a Roman coin of the Emperor Domitian; and, at a depth of about seven feet, a stone implement of a rude unground type, and a metatarsal bone of a pig, with an evenly bored circular hole drilled through it. This it was at first imagined had been an amulet. Professor Busk thought that it partially resembled the bone whistles found in the south of France. Two pointed bone implements were also found, and several fragments of rude unbaked pottery. Of the various animal remains met with, the most numerous are the goat, kid, pig, boar, fox, badger, two species of deer, *Cervus elaphus* and *C. capreolus*, and an immense quantity of bones of the wild goose. Of those of which only a few remains are met with, may be mentioned the *Mus rattus*, *Arvicola amphibius*, *Felis catus*, one posterior molar of the horse, two canines and a molar of the dog. The bottom of the cavern has not yet been reached, and several hundred tons of the superficial bone-earth yet require examining. Some time ago, in quarrying stone for an embankment, another bone-cave was discovered in a bluff limestone headland, called Cape's Head, on the western shore of the same peninsula of Cartmel. At the instance of his Grace the Duke of Devonshire, some portion of it was excavated; but the author was not aware of anything important having been found, except a few remains of the smaller *feræ naturæ*. Being in the neighbourhood in May last, he was induced to examine the place; and, on breaking a piece of stalagmite, he found several fragments of charcoal closely imbedded. This

evidence of the human occupancy of the cavern, led him to visit it again, upon which occasion he found a human humerus in the calcified mould and stalagmite adhering to the sides of the cave; he also found a badger's skull, containing one molar tooth. On a subsequent visit, he found a human malar bone, and several animal remains; and he had no doubt that many interesting objects might be found, should a thorough excavation be made. This cavern, at the present time, is 87 feet long, 15 feet broad, and about 10 feet high.

Mr. SALMON, who assisted Mr. Morris in the exploration of the cave, confirmed generally the statements in the paper. He said it was manifest to anyone who examined the cave, that the contents of the cavern could not have fallen into it from a hole on the top. During the exploration, they had removed about two hundred tons of earth; and the masses of stalagmite were so large, that it was necessary to blast them. He did not pretend to form any opinion as to the age to which the objects found belonged. In the same locality there were many similar caverns, and other records of ancient times; and, if it should be the opinion of the meeting that it was desirable further explorations should take place, it would encourage those who lived in the neighbourhood to persevere in their exertions to explore. He called attention to the flint flake imbedded in the stalagmite, for it was remarkable that there was no flint in the neighbourhood. In exploring the cave, they came upon a large deposit of sea-sand; which showed that the level of the sea must have changed, and that the sea at one time flowed into the cave.

Mr. HENRIQUES thought it was desirable to know the character of the roof of the cave, and its description generally. The position of the objects found should also be considered, as indications of their relative ages. The coin of Domitian found there, showed that one of the objects, at least, was not of great antiquity. The geological character of the cave and the form of the orifice were important, as affording some grounds on which to arrive at a proximate conclusion respecting the period when the various objects were deposited.

Mr. C. CARTER BLAKE remarked, in reference to the character of the supposed flint flake, that it was composed of silex, but he could not say whether it was flint or chert. He asked Mr. Salmon whether there were any deposits of flint in the neighbourhood?

Mr. SALMON replied that there were none.

Mr. BLAKE, in continuation, said that, among the bones found in the cave, there was said to be a fragment of a human fibula, but which was not really so. There was, indeed, not much to be said respecting the human remains. The portion of the skull discovered exhibited high cranial development, and was similar in general character to the skulls found in the graves of the bronze period in Durham. Mr. Thomas Wright, the distinguished antiquary, had looked over the remains now on the table; and he said there was nothing among them more remote than the Roman period, with the exception, probably, of the flint flake. The head was similar in pattern to those found in Italy. The bones were generally identical with those of the

animals now living in the district. There was not among them the bones of any domestic animal; but he hoped it would not thence be inferred that they belonged to a period before the domestication of animals in Britain. The interest of the cave was greater in a geological and palæontological sense than in an anthropological one; for the animal bones found in it were of more interest than the human bones.

Mr. MACKENZIE said that, if they looked to the peculiar way in which these objects were found in the cave, they must suppose that they got in both from a lateral entrance and from the top; and it might be accidental that any of the works of man got there at all. His impression was altogether against attaching any value to the contents of these caves. They had not yet attained any scientific result from them, nor had they ascertained the period at which they were occupied; and he thought it would be wise to pause before they drew any conclusions from them.

Mr. BOLLAERT said that, when chemical assistant in the Royal Institution, and having assisted the late Dr. Buckland, about 1822, in preparing some of the fossil bones from the Kirkdale caves, he attached considerable value to the objects found in the cave at Kirkhead. From the statement of Mr. Salmon, he was inclined to think that, if they were to dig deeper, they would come to larger masses of stalagmite, among which some other interesting relics might be found. He thought it was worthy of the Society's consideration, whether they should not give assistance for making further researches in the cave.

Mr. SALMON explained that they had already pierced through much stalagmite, of which there were three or four large deposits, but they were small compared with the quantity of earth excavated. The rock of the cave was limestone, and there were found within it a number of clay-slate pebbles, though there was no clay-slate in the immediate locality; therefore they could not have got in from the top of the cave, but from its mouth. With respect to Mr. Wright's opinion as to the period to which the relics belonged, that gentleman, in a letter to Mr. Morris, excepted the piece of pottery from the rest, as he was doubtful whether it was Roman.

Mr. BLAKE added that Mr. Wright had since alluded to it, and said his doubts were whether it belonged to a British or to a late Roman period.

The meeting then adjourned to the 19th instant.

---

JUNE 19TH, 1866.

JAMES HUNT, ESQ., PH.D., F.S.A., F.R.S.L., PRESIDENT, IN THE CHAIR.

THE minutes of the preceding meeting were read and confirmed.

The names of the following gentlemen, who had been elected Fellows, were announced:—John Stirling, Esq., M.A., Langham Chambers, Portland Place; Charles Rooke, Esq., M.D., F.G.S., Bellevue Cottage, Scarborough.